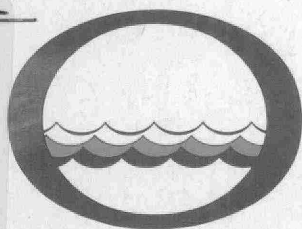


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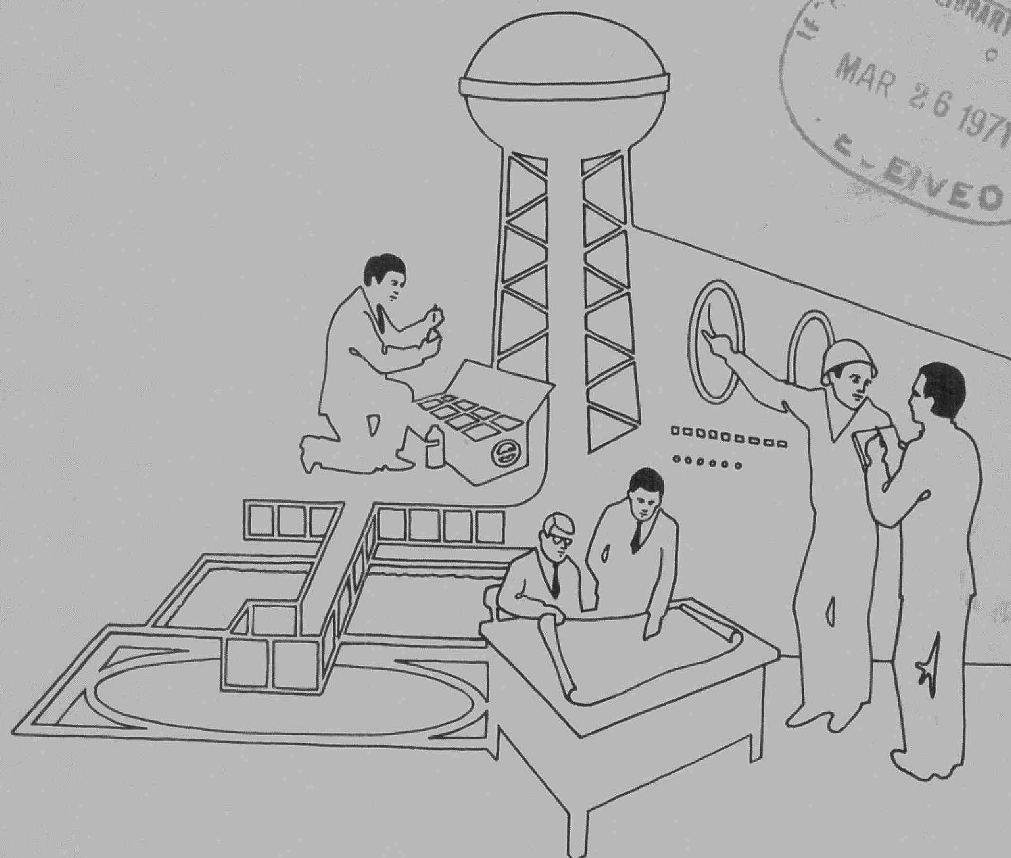


Water management in Ontario

Ontario
Water Resources
Commission

District
Engineers
Branch

O.W.R.C.
District Engineer
Br.



METROPOLITAN TORONTO

REPORT ON
OUTFALL SURVEY
of the
DON RIVER

FEBRUARY, 1971

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REPORT ON
AN OUTFALL SURVEY
OF THE
DON RIVER AND TRIBUTARIES
WITHIN
THE MUNICIPALITY OF METROPOLITAN TORONTO

DISTRICT ENGINEERS BRANCH
DIVISION OF SANITARY ENGINEERING

FEBRUARY, 1971

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SUMMARY

This report describes the work done and the results obtained on a survey of the Don River and its principal tributaries within Metropolitan Toronto, the purpose of which was to locate and sample, if possible, all sources or potential sources of significant flow to the river.

Figures one through four show the river and the sampling points, appendices one through four provide a very brief description of each point, and tables two through five present the results of those samples collected. Samples were collected by staff of the District Engineers Branch and were analysed at the Ontario Water Resources Commission laboratory. Despite the fact that numerous outfalls were purposely omitted, and others, particularly on the lower portion of the Main Don were no doubt overlooked, a total of 455 points are shown, of which 202 were sampled.

Table I presents a condensed version of water quality data that are available for the mouth of the Don. These data are available through the efforts of the Metropolitan Toronto and Region Conservation Authority, who collect the samples, the Ontario Water Resources Commission laboratory who perform the analyses, and the Water Quality Surveys Branch of this division who maintain the results. It can be seen that, overall, the water quality at the mouth has improved over the past fourteen

years. The suspended solids results would seem to support the opinion that much of what is termed pollution in the Don River is suspended inorganic material which is present in the water mainly as a result of erosion.

RECOMMENDATIONS

The appropriate municipalities should now take action as suggested in the report, i.e.:

- 1) Investigate and correct the cause or causes of the poor quality of effluent from the points noted on page 20.
- 2) Establish the quality of effluent from the other points within the municipality and institute corrective measures to bring the quality of these effluents at least to within the limits established by Metropolitan Toronto By-Law 2520.

CHAPTER I

INTRODUCTION

The Ontario Water Resources Commission plans to survey each of the five major watercourses within Metropolitan Toronto for two purposes, namely, producing for each a plan or plans showing all sources or potential sources of flow into it, and determining the quality of those flows.

The work being reported upon at this time comprised, basically, one sampling run on the Don River and its main tributaries within Metropolitan Toronto. The hazards of using the analysis results from one grab sample from a particular outfall to form an opinion as to the acceptability of the discharge from that outfall at all times and in all weather conditions are obvious. In most instances, therefore, the analysis results presented in this report should not be used as a basis for action until they have been substantiated by additional results. There are some cases, however, where the results are sufficiently adverse to warrant immediate remedial measures, and these have been pointed out.

The purpose in producing a report at this time without conducting additional sampling runs is to present the results to the municipalities involved without additional delay. Each municipality is responsible for the quality of the water it is discharging from its sewers to various

watercourses, and it is therefore considered that having been provided with these preliminary results the municipalities should now initiate the appropriate action to ensure themselves that their sewer discharges are of acceptable quality.

The majority of the field work for this survey was accomplished in the period from March 23 to April 9, 1970 and, naturally, the work was done under a wide variety of weather conditions. Appendix V presents data obtained from the Meteorological Branch of the Federal Department of Transport on those conditions. It is emphasized that the weather has a profound effect on the quality of discharges and no attempt should be made to compare sample results for sections that were surveyed under different conditions.

With the exception of Chapter I, which provides general background information on the Don, including some reference to combined sewers, and photographs, the balance of this report is simply a presentation of results.

Four plans have been drawn, one for each of the Main Don, West Don, East Don and Taylor Creek, which show the approximate location of each source or potential source of significant flow to the watercourse. It is felt that by reference to these plans and the descriptions provided in Appendices I - IV the points can be readily located in the field. At one time it was intended to include every possible

source of flow but this proved to be unfeasible and consequently many local drains, small watercourses, etc., have not been included.

Tables two through five contain the results of analysis of the samples collected. Included also are the results on samples taken at some locations subsequent to the survey in the course of investigating specific pollution complaints.

CHAPTER II

GENERAL

A) Watershed Data

The Don River watershed comprises a total area of approximately 140 square miles, of which 81 square miles are in Metropolitan Toronto. Within Metropolitan Toronto there are three principal tributaries to the Don, these being the West Don, the East Don and Taylor Creek. Taylor Creek converges with the East Don north of the Don Mills Road - Don Valley Parkway interchange, just west of the Parkway, and their combined discharge then flows under Don Mills Road and converges with the West Don roughly 200 feet west of Don Mills Road.

B) Water Pollution Control Plants

North of Metropolitan Toronto five water pollution control plants discharge treated sewage to tributaries of the Don. The Town of Vaughan West Don plant, the House of Concord sewage treatment system and the plant serving the Department of Lands and Forests Research Station near Maple all discharge to the West Don, The Town of Markham John Street plant discharges to the East Don, and the Town of Richmond Hill plant discharges to German Mills Creek, which in turn converges with the East Don north of Cummer Avenue.

Within Metropolitan Toronto one water pollution control plant, the North Toronto plant, uses the Don as a receiving water. This plant is of the activated sludge type (as are the four of the five north of Metropolitan Toronto, the exception being the House of Concord system which comprises a septic tank and underdrained tile field), and at present affords satisfactory treatment to a reasonably constant flow of nine million gallons per day, (MGD).

C) Combined Sewers

The local municipalities through which the Don and its tributaries flow in Metropolitan Toronto are the Boroughs of North York, East York and Scarborough, and the City of Toronto. With the exception of the Borough of North York, each of the municipalities on the watershed has at least part of its drainage area served by a combined sewer system.

The effects of such a system can best be illustrated by using as an example flow data from the North Toronto water pollution control plant. The area served by this plant consists of parts of the Boroughs of North York and East York, and the City of Toronto and comprises roughly all of the city north of Montclair - Lonsdale and the Mount Pleasant Cemetery, that part of North York bounded by Dufferin Street, Avenue Road, Highway 401 and Hillhurst Boulevard, and the portion

of East York north-west of the Don Valley Parkway. A great deal of the area is served by combined sewers.

It was stated previously that the North Toronto plant treats a relatively constant flow of nine million gallons per day. Flows from the tributary area in excess of nine million gallons per day are directed to the main treatment plant at Ashbridges Bay via the Don River and Coxwell Avenue trunk sewer, the capacity of the trunk sewer from the North Toronto plant being about 31 MGD. Flows in excess of the combined trunk sewer and treatment plant capacity are directed to a storm tank, the overflow from which is mixed with the effluent from the treatment plant and discharged to the Don River. The overflow from the storm tank is metered, and consequently the following information respecting overflows was easily obtained:

<u>YEAR</u>	<u>NUMBER OF OVERFLOWS</u>	<u>TOTAL SEWAGE VOLUME OVERFLOWED (gallons)</u>
1967	59	562,900,000
1968	44	512,150,000
1969	41	320,675,000
1970	45	316,460,000

This is only one of several points at which untreated combined sanitary and storm sewage is discharged to the Don during run-off periods and is cited as an example only because records are available. It is expected that both the

frequency and volume of such discharges will decrease even more significantly over the next few years as progress is made in sewer separation programmes. Acceleration of both existing and proposed separation programmes would naturally result in a more rapid improvement of the overflow situation and is therefore desirable.

D) Water Quality

Table 1 presents a summary of water quality data for the mouth of the Don River. In contrast to other sample results in this report these particular ones represent the result of regular and continuous sampling over an extended period of time and are therefore of significant value in attempting to form an opinion concerning the quality of the Don River. It can be seen that there appears to have been some improvement in quality over the 14-year period.

E) Photographs

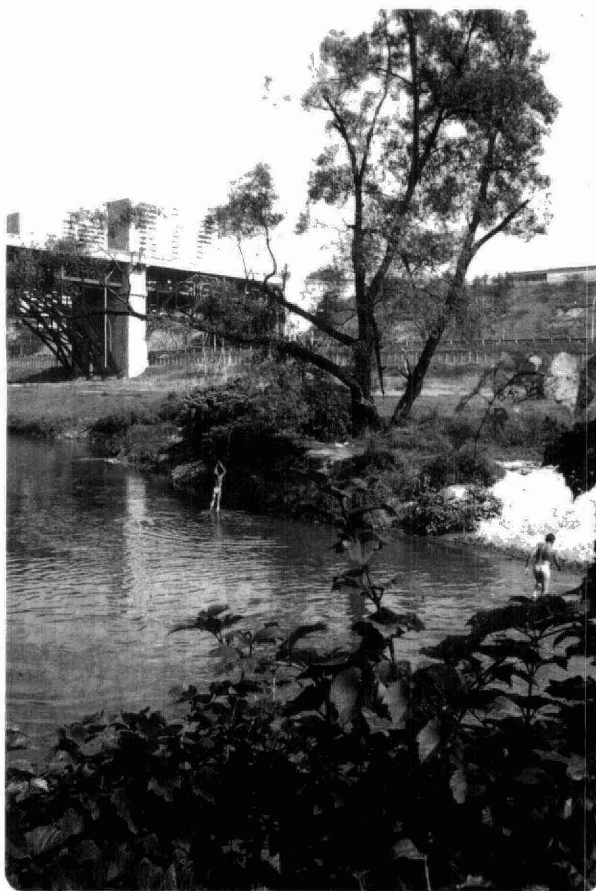
A widespread criticism of the Don River often relates to its appearance. The following photographs, which were taken at various times over the past three to five years, have been included in this report to show what one could encounter on the river. Most of them were taken within Metropolitan Toronto, however, some were obtained north of Steeles Avenue, outside the area covered by the report.



Debris at Mouth of Don - Toronto Harbour Commission



Debris at CPR Bridge - Toronto Harbour Commission



South of Prince Edward Viaduct - OWRC



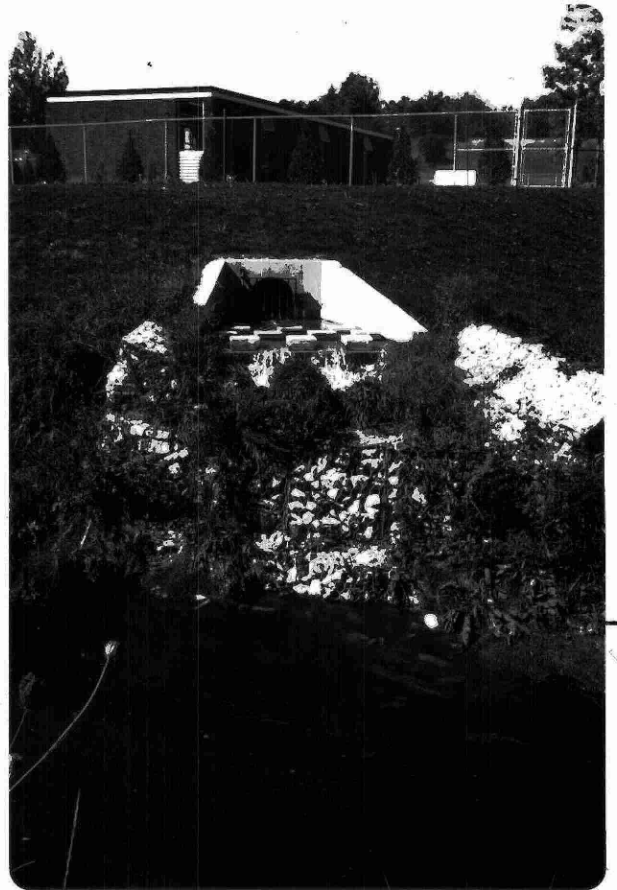
Bank Erosion Near Cummer Avenue - OWRC



Oil Upstream From West Don WPCP - OWRC



Construction On East Branch Near Eglinton - OWRC



East Don at John Street WPCP Following Period
of Faulty Operation - OWRC



Debris Near Cummer Avenue - OWRC



Edwards Gardens - OWRC

CHAPTER III
ANALYTICAL RESULTS

A) General

Chemical and bacteriological results were obtained for each point sampled. In most cases the chemical analyses requested were BOD₅, total, suspended and dissolved solids and phenols, while total coliform and faecal coliform determinations were requested on the bacteriological samples.

In spite of the fact that the single result available for most of the points cannot be interpreted as representing average conditions at that point, it was decided that the results should nevertheless be compared with some standard.

Two standards suggested themselves; Metropolitan Toronto By-Law 2520 which regulates the discharge of sewage and land drainage in the Metropolitan Area, and the Model Sewer Use By-Law suggested by the Ontario Water Resources Commission. The criteria established in these two sources for waters to be discharged to a storm sewer or watercourse are:

	<u>METROPOLITAN TORONTO BY-LAW 2520</u>	<u>OWRC MODEL BY-LAW</u>
BOD ₅	20 mg/l	15 mg/l
Suspended Solids	30 mg/l	15 mg/l
Phenols	0.04 mg/l	0.02 mg/l
Total Coliform Bacteria	2400 per 100 ml	2400 per 100 ml

The results were compared with the slightly more rigid criteria set out in the Model By-Law. Those samples conforming to all four criteria have been called acceptable while all others have been denoted non-acceptable.

B) Main Don

The Main Don is that portion of the river south of the merging of the three principal tributaries near Don Mills Road. From that point it flows generally southerly to where it discharges to Toronto Harbour through the Keating Channel.

Fifty-seven points of discharge or potential discharge to the river are shown on Figure I and listed in Appendix I. It is thought that of the lists of outfalls compiled, this one is the most incomplete. In addition to submerged outfalls that could not be seen due to the turbidity of the water, numerous pipes provided to carry drainage from the Don Valley Parkway were purposely omitted from the list.

Twenty-four of the 57 points listed were flowing significantly and were sampled, with the results being presented in Table II.

One of the 24 is of acceptable quality. Twenty-two of the samples exceed the criteria for suspended solids, twelve, that for coliform bacteria, six, that for BOD₅ and four, that for phenols.

Virtually all of the samples collected from this portion of the river were obtained either during or within 48 hours of significant quantities of precipitation.

C) West Don

This branch of the Don enters Metropolitan Toronto east of the Steeles Avenue - Dufferin Street intersection and flows in a general south-easterly direction to its confluence with the other branches.

A total of 166 possible sources of flow into this branch are indicated on Figure II and listed in Appendix II. There was significant flow at 55 of the points which were therefore sampled. Table III presents the results of analysis of those samples.

It can be seen that all four criteria are satisfied by 21 of the points, the balance being unsatisfactory for one or more reasons. The suspended solids criteria is exceeded at 25 points, the coliform criteria at 13 points, the BOD₅ at two, and the phenol at one. It is worth noting that the sample containing high phenols was obtained subsequent to the survey, as a result of a complaint concerning a fuel oil discharge.

Field work on this branch of the river was done primarily in dry weather.

D) East Don

The East Don enters Metropolitan Toronto at the intersection of Bayview and Steeles Avenues. It flows in a general south-south-easterly direction to approximately Eglinton Avenue, from where it flows southerly, and then south-westerly, to the confluence with the other branches.

Appendix III and Figure III show 113 locations of potentially significant flow to this branch, while Table IV presents analysis results of the 62 of those points that were sampled. It will be seen that additional samples were taken subsequent to the survey at some points, upstream from the original location, and that these have been denoted ED-11A, ED-11B, ED-12A, etc.

Seven of the locations exhibit satisfactory quality, while the balance are unacceptable for one or more reasons. Again the suspended criteria was the one most often exceeded at 56 times, with the criteria for coliform bacteria, BOD₅ and phenols being exceeded 26, 15 and 12 times respectively.

Weather conditions encountered during field work on this branch were mostly wet, with only one day of five days spend on the branch being free of precipitation.

E) Taylor Creek

Taylor Creek, which is referred to by some

as Massey Creek, originates south of Highway 401 and east of Pharmacy Avenue as the discharge from two 36-inch diameter pipes. From this origin it flows generally south-easterly to the Kennedy Road - Eglinton Avenue area, westerly to Warden and Eglinton Avenues, south-westerly to Pharmacy Avenue and then north-westerly to its confluence with the East Don near the Don Valley Parkway.

Appendix IV lists 119 sampling points on Taylor Creek. It should be noted that numbers T-118 and T-119 are not included on Figure IV, since the plan was not extended far enough northward to include them. Accordingly, they are more fully described in the appendix.

Table V presents the results of analysis of samples collected from 61 of the 119 points. Ten of the samples are of acceptable quality.

Once again the criteria most often exceeded was that for suspended solids, it being exceeded at 45 of the points. The criteria for coliform bacteria, BOD_5 and phenols were exceeded 29, 8 and 20 times respectively.

Approximately half of Taylor Creek was surveyed under dry weather conditions, while the balance was done during periods of wet weather.

F) Discussion of Results

Although, as stated previously, the sample results presented here cannot be taken as being representative of average conditions at the sampling locations it is felt that some of the results are sufficiently bad to warrant immediate corrective action by the appropriate municipality. These are listed following, by municipality:

Borough of East York

T-1, T-18, T-19, T-21, T-25, T-31, T-37, T-46

Borough of North York

ED-11B, ED-13, ED-15, ED-16, ED-17, ED-51, ED-61, ED-63,
ED-82, WD-40, WD-50, WD-140

Borough of Scarborough

T-53, T-67, T-73, T-79, T-86, T-95, T-106

City of Toronto

D-31, D-31A (Action already taken)

D-37

From the plans and descriptions it should be possible for the municipalities to relate the various sampling locations to the discharge points from their sewer systems. They should then proceed upstream through the systems to isolate and rectify the cause or causes of these poor sample results.

It will be noted that points on the lower portion of the Main Don have not been included in the foregoing. This is because it is recognized that the high counts obtained on this section were the result of combined sewer systems and that the City's separation programme ultimately should eliminate these adverse flows. On the other hand, T-53, in the Borough of Scarborough, has been included. This outfall also is in an area of combined sewers, however it is thought that since only a trace of precipitation had fallen for four days prior to the date of sampling, there should not have been such an overflow from the sewer system.

Concerning the balance of the points, it is felt that the municipalities should relate these to their sewer system discharge points as well, and sample them in order that their quality can be established with some certainty. Those points having discharges of consistently poor quality should then be investigated further as suggested above.

The assistance of the Ontario Water Resources Commission in locating sampling points and providing laboratory analytical facilities is available.

Prepared by:.....


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/cs

TABLE II

ANALYTICAL RESULTS - MAIN DON

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
D-4	March 24	6.5	860	195	665	15	<4	<4	60
D-5	March 24	5.5	5,430	4,500	930	12	<4	4	2,400
D-7	March 24	15	830	35	795	6	<4	<4	--
D-9	March 24	17	980	320	660	12	800	42,000	250
D-10	March 24	14	1,170	485	685	15	3,200	13,000	260
D-12	March 24	3.0	410	15	395	8	5,000	19,000	3
D-20	March 24	8.0	740	20	720	12	41,000	200,000	6
D-21	March 24	11	390	45	345	25	7,000	2,000	15
D-22	March 24	9.0	1,110	470	640	15	15,000	19,000	330
D-24	March 24	7.5	840	185	655	15	6,900	11,000	230
D-25	March 24	8.0	930	325	605	12	3,100	16,000	260
D-26	March 24	18	1,150	420	730	12	>15,000	95,000	190
D-28	March 24	7.0	1,260	35	1,225	7	7,900	19,000	30
D-31	March 24	340	2,650	100	2,550	250	-----	76	350

TABLE II (Cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
D-31A	June 3	28,000	33,600	1,700	31,900	15,000	-----	-----	---
D-34	April 2	5.0	1,655	520	1,135	7	10	300	
D-36	April 2	2.4	2,490	130	2,360	18	4	160	
D-37	April 2	10	1,930	400	1,530	12	46,000	510,000	
D-38	April 2	5.0	4,955	80	4,875	65	<4	120	
D-39	April 2	6.5	6,995	115	6,880	12	4	92	
D-40	April 2	3.0	2,520	70	2,430	3	<4	24	
D-45	April 2	70	625	320	305	10	32,000	1,030,000	
D-47	April 1	0.6	1,210	45	1,165	5	<4	36	30
D-49	April 1	320	2,110	60	2,050	80	700	13,000	120
D-56	April 1	0.6	1,630	5	1,625	7	<4	40	6

Chloride
204

TABLE III

ANALYTICAL RESULTS - WEST DON

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
WD-5	April 8	0.6	800	5	795	7	<4	36
WD-12	April 8	13	830	65	765	10	296	310
WD-15	April 8	1.0	4,460	5	4,455	0	<4	32
WD-16	April 8	1.2	2,210	5	2,205	0	56	240
WD-19	April 8	14	370	40	330	0	<4	7,300
WD-21	April 8	26	1,500	410	1,090	3	90	230
WD-25	April 8	6.0	400	5	395	0	<4	<4
WD-29	April 8	2.5	1,110	25	1,085	5	<4	16
WD-31	April 8	3.5	1,090	5	1,085	3	144	192
WD-32	April 8	0.4	570	5	565	9	<4	8
WD-36	April 8	0.8	1,180	5	1,175	5	64	1,700
WD-37	April 8	0.6	550	5	545	0	<4	4
WD-40	April 8	1.6	4,090	3,200	890	0	<4	8
WD-40	May 20	2.0	6,350	5,730	620	-	---	130

IRON as Fe (ppm)
177

TABLE III (Cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
WD-42	April 8	1.2	990	280	710	0	<4	4
WD-43	April 8	4.5	760	100	660	6	1,900	2,100
WD-44	April 8	2.5	500	5	495	5	<4	<4
WD-48	April 8	2.0	850	45	805	7	188	930
WD-49	April 8	7.0	1,050	240	810	0	12	1,000
WD-50	April 8	8.5	1,690	20	1,670	7	13,200	56,000
WD-51	April 8	2.5	4,470	5	4,465	3	<4	<4
WD-55	April 8	0.4	690	60	570	0	20	36
WD-57	April 8	2.5	660	10	650	0	500	2,600
WD-62	April 9	0.4	540	20	520	6	<4	<4
WD-71	April 9	0.4	640	40	600	0	116	1,700
WD-74	April 9	1.0	1,750	---	---	0	8	12
WD-76	April 9	3.5	770	220	550	6	<4	70
WD-85	April 8	10	1,450	5	1,445	6	5,600	7,800
WD-87	April 8	22	650	45	605	10	4,100	8,400
WD-90	April 8	4.5	3,130	5	3,125	0	232	12,400
WD-91	April 8	2.0	1,150	480	670	5	150	380

TABLE III (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		IRON AS Fe (ppm)
			Total	Suspended	Dissolved		Faecal	Total	
WD-92	April 8	1.0	670	35	635	6	<4	<4	5.50
WD-96	April 8	1.8	5,180	5	5,175	0	264	900	
WD-106	April 8	2.0	13,740	5	13,735	7	512	1,100	
WD-111	April 8	1.8	2,170	5	2,165	4	468	3,900	
WD-117	April 8	3.5	840	5	835	3	6,400	10,300	
WD-118	April 8	1.6	1,090	65	1,025	0	188	324	
WD-118	May 26	140	910	5	905	25	70	1,400	<u>ETHER SOLUBLES</u> 76
WD-125	April 7	3.0	1,450	315	1,135	0	188	2,900	
WD-130	April 7	1.2	3,590	650	2,940	0	24	84	
WD-135	April 7	0.4	500	10	490	0	---	<4	
WD-138	April 7	11	1,480	35	1,445	0	56	260	
WD-140	April 7	3.5	---	---	---	2	13,800	161,000	
WD-142	April 7	1.4	950	---	---	2	800	1,700	
WD-144	April 7	2.5	1,000	5	995	0	16	48	
WD-147	April 7	1.4	1,000	5	995	0	72	80	

TABLE III (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
WD-151	April 7	6.5	840	50	790	5	36	260
WD-152	April 7	7.0	1,430	340	1,090	0	120	2,600
WD-153	April 6	2.6	980	290	690	6	308	230
WD-156	April 6	1.6	515	5	210	5	328	10,200
WD-157	April 7	2.5	600	10	590	0	16	7,200
WD-159	April 7	1.2	560	5	555	3	8	116
WD-160	April 7	7.5	290	5	285	7	56	108
WD-161	April 6	1.2	215	5	210	5	<4	52
WD-163	April 6	1.4	740	550	190	2	<4	<4
WD-164	April 6	2.0	1,100	---	88	7	800	1,700
WD-165	April 6	4.0	860	30	830	0	16	88

TABLE IV

ANALYTICAL RESULTS - EAST DON

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
ED-3	April 1	8.5	940	40	900	5	<4	880	50
ED-7	April 1	85	3,935	75	3,860	350	4	24	60
ED-8	April 1	20	1,170	40	1,130	250	288	14,000	100
ED-9	April 1	0.6	710	25	685	0	<4	<4	30
ED-11	March 26	48	1,710	405	1,305	25	1,600	12,000	450
ED-11	May 26	22	820	25	795	----	190	11,900	--
ED-11A	June 24	1.4	650	5	645	----	200	2,700	--
ED-11B	June 24	300	930	270	660	----	5,200	75,000,000	--
ED-12	March 26	28	8,300	7,100	1,200	35	1,600	61,000	2,000
ED-12	April 1	13	1,250	50	1,200	350	476	4,700	50
ED-12	May 26	2.5	1,220	50	1,170	----	220	3,100	--
ED-12A	June 24	2.0	880	5	875	----	3,700	19,700	--
ED-13	March 26	25	1,645	395	1,250	35	7,400	58,000	350
ED-13	May 26	8.0	1,800	10	1,790	----	600	18,000	--

(ppm)
IRON as Fe
0.45

TABLE IV (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
ED-13	June 24	13	1,130	10	1,120	--	48,000	260,000	--
ED-15	March 26	40	4,135	3,525	610	18	3,500	6,200	300
ED-16	March 26	44	6,840	5,660	1,180	30	6,000	6,000	1,500
ED-17	March 26	60	6,620	5,990	730	35	400	20,000	1,200
ED-18	March 26	20	960	240	720	7	1,680	2,600	120
ED-19	March 26	19	1,870	130	1,740	12	3,000	10,600	90
ED-20	March 26	17	1,660	85	1,575	7	68	160	20
ED-21	March 25	2.0	450	15	435	3	<4	144	
ED-23	April 6	4.4	1,500	90	1,410	0	<4	230	
ED-24	March 25	9.5	350	105	245	5	<4	240	
ED-26	March 25	2.0	460	5	455	2	<4	48	Anionic Detergents as $\frac{ABS}{0.8}$ (ppm)
ED-29	March 25	4.0	1,455	165	1,290	18	<4	<10	
ED-39	March 25	2.5	1,460	105	1,355	0	600	900	
ED-40	March 25	3.5	1,220	5	1,215	10	>600	7,400	
ED-42	March 25	2.0	3,520	5	3,515	5	>600	900	
ED-43	March 25	2.5	365	5	360	9	<4	8	

TABLE IV (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
ED-44	March 25	2.0	965	5	960	10	<4	<4	
ED-45	March 25	2.5	1,090	95	995	9	420	>150	
ED-46	March 25	17	1,650	40	1,610	15	1,100	1,100	
ED-48	March 25	2.0	1,990	80	1,910	30	<4	2,400	
ED-49	March 24	5.0	730	20	710	--	4	20	
ED-50	March 24	4.0	9,080	45	9,035	--	<4	140	
ED-51	March 24	12	2,790	2,350	440	--	68	300	
ED-52	March 24	4.0	1,510	20	1,490	--	1,100	2,700	
ED-53	March 24	19	1,120	25	1,095	--	<4	36	
ED-55	March 24	2.5	1,040	70	970	--	192	416	
ED-57	March 24	2.0	9,960	330	9,630	--	24	70	
ED-58	March 24	5.0	780	30	750	--	12	60	
ED-61	March 24	6.5	8,140	7,480	660	--	4,200	6,500	
ED-63	March 24	1.8	2,730	1,130	1,600	--	<4	240	
ED-65	March 24	2.0	3,330	45	3,285	--	4,100	6,400	
ED-66	March 24	2.5	5,350	95	5,255	--	164	180	

TABLE IV (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
ED-67	March 24	1.8	2,790	455	2,335	--	464	730	
ED-70	March 24	2.0	2,050	15	2,035	--	16	68	
ED-71	March 24	3.0	860	80	780	--	1,800	13,000	
ED-72	March 24	1.2	600	25	575	--	168	700	
ED-73	March 24	5.0	1,430	310	1,120	--	212	364	
ED-74	March 24	1.0	640	10	630	--	<4	24	
ED-77	March 23	3.0	1,130	460	670	8	188	260	
ED-78	March 23	5.0	2,155	915	1,240	12	1,500	1,740	
ED-80	March 24	1.0	1,360	115	1,245	--	692	2,700	
ED-81	March 24	1.8	1,460	45	1,415	--	5,900	12,000	
ED-82	March 23	8.0	---	1,400	---	15	2,100	3,820	
ED-83	March 23	3.5	1,175	35	1,140	15	60	390	
ED-84	March 24	1.6	800	10	790	--	68	140	
ED-85	March 23	8.0	1,400	660	740	8	300	1,300	
ED-86	March 23	4.0	950	45	905	8	1,040	2,000	

TABLE IV (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS	COLIFORMS /100 ml		TURBIDITY UNITS
			Total	Suspended	Dissolved		Faecal	Total	
ED-87	March 23	7.5	1,115	275	840	12	540	940	
ED-89	March 23	6.0	515	60	455	8	300	1,300	
ED-90	March 23	5.5	500	230	270	25	130	190	
ED-91	March 23	5.0	1,145	400	745	12	760	1,200	
ED-92	March 23	5.5	1,895	450	1,445	25	28	90	
ED-93	March 23	3.5	2,975	130	2,845	25	<10	60	
ED-95	March 23	2.0	360	40	320	6	260	1,500	
ED-97	March 23	3.5	980	300	680	12	160	3,400	
ED-101	March 23	3.0	1,320	315	1,005	10	220	360	
ED-114	March 23	7.0	1,590	895	695	12	350	1,100	

TABLE V

ANALYTICAL RESULTS - TAYLOR CREEK

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
T-1	April 3	6.0	1,060	45	1,015	5	850,000	1,800,000
T-4	April 3	1.6	640	15	625	0	80	224
T-11	April 3	110	1,700	330	1,370	7	3,400	7,000
T-18	April 3	5.5	1,485	30	1,455	4	89,000	141,000
T-19	April 3	5.0	1,260	35	1,225	5	53,000	82,000
T-20	April 3	0.8	980	15	965	5	<4	<4
T-21	April 3	10	1,280	165	1,115	8	56,000	139,000
T-22	April 3	1.2	700	10	690	0	<4	<4
T-25	April 3	4.5	885	185	700	0	15,300	56,000
T-31	April 3	46	1,290	40	1,250	7	6,100	6,800
T-33	April 3	1.2	480	35	445	0	<4	12
T-37	April 3	3.5	2,545	1,635	910	3	40	190
T-38	April 3	1.6	625	30	595	4	1,200	4,000
T-39	April 3	1.2	750	15	735	0	<4	64

TABLE V (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
T-42	April 3	1.5	515	10	505	0	<4	28
T-44	April 3	5.5	1,590	170	1,420	-	56	1,100
T-46	April 3	4.0	1,965	1,425	540	-	---	11,000
T-47	April 3	16	1,020	95	925	-	<4	<4
T-49	April 3	2.0	600	15	585	-	<4	20
T-50	April 3	3.5	590	90	500	-	12	28
T-51	April 3	5.0	570	35	535	-	88	6,600
T-53	April 6	100	800	120	680	20	73,000	580,000
T-58	April 6	3.5	840	40	800	0	140	1,200
T-60	April 6	1.2	700	5	695	0	<4	<4
T-61	April 6	2.5	1,200	190	1,010	0	600	1,400
T-63	April 6	4.0	570	40	530	6	2,000	11,200
T-64	April 6	1.4	1,000	375	625	5	8	36
T-65	April 3	5.0	420	60	360	-	80	310
T-66	April 3	3.0	540	160	380	-	<4	76

TABLE V (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml		
			Total	Suspended	Dissolved		Faecal	Total	
T-67	April 3	6.5	890	75	815	-	54,000	90,000	
T-68	April 3	2.5	820	30	790	-	<4	<4	
T-69	April 3	40	1,285	535	750	-	680	820	Conductivity in micromhos/cm ³
T-70	April 3	8.0	2,420	235	2,185	-	160	240	
T-71	April 3	3.5	2,165	45	2,120	-	132	500	3500
T-72	April 3	26	1,060	375	685	-	128	300	
T-73	April 3	8.0	1,355	255	1,100	-	17,900	44,000	
T-77	April 3	2.0	330	95	235	-	<4	56	350
T-79	April 3	6.0	1,235	75	1,160	-	8,500	50,000	
T-80	April 3	7.0	1,695	150	1,545	-	276	2,000	
T-81	April 3	6.5	1,745	165	1,580	-	140	360	
T-82	April 3	1.4	525	40	485	-	<4	104	
T-84	April 3	2.0	410	10	400	-	<4	44	
T-86	April 3	6.0	1,650	440	1,210	-	2,000	58,000	
T-88	April 3	2.5	865	15	850	-	396	4,100	
T-89	April 3	2.0	840	20	820	-	1,900	3,400	

TABLE V (cont'd)

SAMPLE POINT	DATE SAMPLED (1970)	5-DAY BOD (ppm)	SOLIDS (ppm)			PHENOLS (ppb)	COLIFORMS /100 ml	
			Total	Suspended	Dissolved		Faecal	Total
T-90	April 3	5.5	2,930	55	2,875	-	68	92
T-91	April 1	6.0	485	145	340	-	230	8,000
T-92	April 2	5.0	360	105	255	-	<4	4
T-93	April 2	16	830	250	580	-	1,500	7,300
T-94	April 2	8.0	865	230	580	-	3,700	27,000
T-95	April 2	8.5	550	220	330	-	400	1,340,000
T-96	April 2	11	800	290	510	-	4,800	7,000
T-97	April 2	9.0	1,110	270	840	-	640	8,100
T-102	April 2	4.0	315	15	300	-	<4	<4
T-103	April 1	3.0	530	100	430	-	---	390
T-104	April 1	1.6	1,225	15	1,210	-	---	6,800
T-106	April 1	36	560	15	545	-	---	530,000
T-107	April 1	0.8	375	10	365	-	---	<4
T-109	April 1	4.0	395	10	385	-	---	16,300
T-111	April 1	1.2	1,140	5	1,135	-	---	2,700
T-117	April 1	1.6	1,070	10	1,060	-	---	8,000

pH
8.1

APPENDIX I

POINTS OF DISCHARGE TO MAIN DON

<u>DESIGNATION</u>	<u>DESCRIPTION</u>	<u>SAMPLED</u>	
		<u>NO</u>	<u>YES</u>
D-1	east side, 12" Ø concrete pipe	x	
D-2	west side, 24" Ø concrete pipe	x	
D-3	east side, 2' x 3' egg-shaped pipe (submerged)	x	
D-4	west side, 30" rectangular pipe		x
D-5	west side, 24" Ø CMP		x
D-6	west side, 12" Ø pipe	x	
D-7	east side, 18" Ø CMP		x
D-8	east side, 48" Ø pipe	x	
D-9	west side, 72" Ø concrete pipe		x
D-10	east side, 5' x 6' rectangular culvert	x	
D-11	west side, 36" Ø cast iron pipe		x
D-12	west side, 72" Ø concrete pipe		x
D-13	east side, 18" Ø pipe	x	
D-14	west side, 24" Ø pipe	x	
D-15	east side, 12" Ø CMP	x	
D-16	east side, three 36" Ø pipes	x	
D-17	west side, three 48" Ø pipes	x	
D-18	east side, 18" Ø pipe	x	
D-19	west side, 27" Ø concrete pipe	x	
D-20	east side, 24" Ø concrete pipe		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
D-21	west side, surface runoff		x
D-22	east side, 6' x 10' rectangular culvert		x
D-23	west side, 36" Ø concrete pipe	x	
D-24	west side, 72" Ø pipe		x
D-25	west side, 96" Ø concrete pipe		x
D-26	east side, 10' x 12' rectangular culvert		x
D-27	west side, five 60" Ø concrete pipes	x	
D-28	west side, watercourse from large outfall		x
D-29	west side, 8" Ø clay pipe	x	
D-30	west side, 15" Ø CMP	x	
D-31	west side, 24" Ø concrete pipe		x
D-31A	west side, ditch upstream of D-31		x
D-32	west side, twin 5' x 6' rectangular culverts	x	
D-33	east side, 10' x 12' rectangular culvert	x	
D-34	west side, 24" Ø CMP		x
D-35	east side, 36" Ø CMP	x	
D-36	west side, 24" Ø CMP		x
D-37	west side, watercourse		x
D-38	east side, 10" Ø CMP		x
D-39	east side, 36" Ø CMP		x
D-40	east side, watercourse		x
D-41	west side, 24" Ø CMP	x	
D-42	west side, 36" Ø CMP	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		<u>NO</u>	<u>YES</u>
D-43	east side, 6" Ø CMP	x	
D-44	east side, 6" Ø CMP	x	
D-45	west side, 9' x 11' oval pipe		x
D-46	east side, 24" Ø concrete pipe	x	
D-47	west side, watercourse		x
D-48	west side, 24" Ø CMP	x	
D-49	west side, 60" Ø CMP		x
D-50	east side, 24" Ø concrete pipe	x	
D-51	east side, 6' x 8' rectangular culvert	x	
D-52	west side, 12" Ø CMP & 24" Ø concrete pipe	x	
D-53	east side, 15" Ø CMP	x	
D-54	east side, 36" Ø CMP	x	
D-55	east side, 12" Ø CMP	x	
D-56	east side, watercourse		x
D-57	east side, 12" Ø CMP	x	

APPENDIX II

POINTS OF DISCHARGE TO WEST DON

DESIGNATION	DESCRIPTION	SAMPLED	
		<u>NO</u>	<u>YES</u>
WD-1	east side, 12" Ø CMP	x	
WD-2	east side, 12" Ø CMP	x	
WD-3	west side, 18" Ø CMP	x	
WD-4	west side, 12" Ø CMP	x	
WD-5	west side, 15" Ø CMP (swamp drainage)		x
WD-6	east side, 12" Ø CMP	x	
WD-7	west side, 24" Ø CMP	x	
WD-8	east side, 8" Ø CMP (parking lot drain)	x	
WD-9	west side, 12" Ø CMP	x	
WD-10	east side, open channel	x	
WD-11	west side, 18" Ø concrete pipe from Overlea Blvd.	x	
WD-12	west side, watercourse		x
WD-13	east side, very small watercourse	x	
WD-14	east side, 6"Ø CMP	x	
WD-15	east side, 36" Ø concrete pipe		x
WD-16	east side, 24" Ø CMP		x
WD-17	east side, 8" Ø CMP	x	
WD-18	west side, 12" Ø CMP	x	
WD-19	west side, 24" Ø CMP		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-20	east side, 24" Ø CMP	x	
WD-21	east side, 48" Ø concrete pipe		x
WD-22	east side, 18" Ø CMP	x	
WD-23	west side, 12" Ø CMP (drains through sanitary landfill site)	x	
WD-24	east side, 8" Ø CMP (road drain from Eglinton Ave.)	x	
WD-25	west side, 36" Ø concrete pipe		x
WD-26	east side, 18" Ø CMP	x	
WD-27	east side, 30" Ø CMP outfall to ditch 100 feet from bank	x	
WD-28	east side, 6" Ø CMP (perforated)	x	
WD-29	east side, 12" Ø CMP		x
WD-30	east side, 12" Ø CMP	x	
WD-31	east side, Wilket Creek at emergence to West Don		x
WD-32	east side, small watercourse		x
WD-33	east side, 12" Ø CMP	x	
WD-34	east side, 12" Ø CMP	x	
WD-35	west side, 36" Ø CMP	x	
WD-36	west side, watercourse		x
WD-37	east side, 18" Ø CMP		x
WD-38	east side, 24" Ø CMP	x	
WD-39	east side, 12" Ø CMP	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-40	west side, 36" Ø concrete pipe		x
WD-41	east side, 24" Ø CMP	x	
WD-42	east side, small watercourse		x
WD-43	east side, small watercourse draining swamp area		x
WD-44	east side, 6" Ø clay tile		x
WD-45	west side, 12" Ø CMP	x	
WD-46	west side, 12" Ø CMP	x	
WD-47	west side, 8" Ø metal pipe	x	
WD-48	east side, small watercourse		x
WD-49	west side, 30" Ø concrete pipe		x
WD-50	west side, 36" Ø CMP from Bayview Ave.		x
WD-51	west side, 12" Ø & 15" Ø CMPs from Bayview Avenue		x
WD-52	east side, 24" Ø CMP	x	
WD-53	west side, small watercourse	x	
WD-54	east side, 24" Ø metal pipe	x	
WD-55	west side, small watercourse		x
WD-56	west side, 15" Ø CMP	x	
WD-57	west side, small watercourse		x
WD-58	east side, 30" Ø CMP	x	
WD-59	east side, 6" Ø CMP (perforated)	x	
WD-60	west side, 18" Ø concrete pipe	x	
WD-61	west side, 24" Ø CMP	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-62	east side, 12" Ø CMP		x
WD-63	east side, 3" Ø clay tile	x	
WD-64	east side, 12" Ø CMP	x	
WD-65	west side, 30" oval CMP	x	
WD-66	east side, 10" Ø concrete pipe	x	
WD-67	west side, 24" Ø concrete pipe	x	
WD-68	east side, 24" Ø CMP	x	
WD-69	west side, 8" Ø cast iron pipe	x	
WD-70	east side, 6" Ø concrete pipe	x	
WD-71	east side, seepage		x
WD-72	east side, seepage	x	
WD-73	east side, 24" Ø CMP	x	
WD-74	west side, 12" Ø concrete pipe		x
WD-75	east side, 15" Ø CMP	x	
WD-76	west side, 10" Ø CMP		x
WD-77	east side, 12" Ø CMP (under bridge)	x	
WD-78	west side, 15" Ø CMP (under bridge)	x	
WD-79	west side, 12" Ø concrete pipe	x	
WD-80	west side, 36" Ø CMP	x	
WD-81	west side, 15" Ø concrete pipe	x	
WD-82	east side, 15" Ø concrete pipe	x	
WD-83	east side, 15" Ø CMP	x	
WD-84	east side, 24" Ø cast iron pipe	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-85	east side, 36" Ø cast iron pipe		x
WD-86	west side, 36" Ø CMP	x	
WD-87	east side, 24" Ø CMP		x
WD-88	west side, 10" Ø cast iron pipe (manhole overflow)	x	
WD-89	west side, 36" Ø CMP	x	
WD-90	west side, 66" Ø concrete pipe		x
WD-91	west side, 6" Ø concrete pipe		x
WD-92	west side, watercourse originating from two 8" Ø tiles		x
WD-93	west side, 30" Ø concrete pipe	x	
WD-94	east side, 24" Ø CMP	x	
WD-95	east side, 5' square concrete structure	x	
WD-96	east side, 48" Ø CMP		x
WD-97	east side, 18" Ø CMP	x	
WD-98	east side, 12" Ø concrete pipe	x	
WD-99	east side, 12" Ø concrete pipe	x	
WD-100	west side, 15" Ø CMP	x	
WD-101	west side, 15" Ø CMP	x	
WD-102	west side, 12" Ø concrete pipe	x	
WD-103	west side, 15" Ø concrete pipe	x	
WD-104	east side, 36" Ø pipe	x	
WD-105	east side, watercourse	x	
WD-106	west side, 48" Ø CMP		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-107	west side, 24" Ø concrete pipe	x	
WD-108	west side, watercourse	x	
WD-109	west side, 30" Ø concrete pipe	x	
WD-110	west side, 24" Ø concrete pipe (plugged)	x	
WD-111	west side, watercourse originating from 8' x 4' rectangular structure		x
WD-112	east side, 24" Ø concrete pipe	x	
WD-113	west side, watercourse from 12" Ø CMP	x	
WD-114	west side, watercourse	x	
WD-115	east side, 18" Ø concrete pipe	x	
WD-116	east side, 15" Ø CMP	x	
WD-117	west side, 15" Ø CMP		x
WD-118	east side, watercourse		x
WD-119	east side, 10" Ø CMP	x	
WD-120	west side, 10" Ø CMP	x	
WD-121	east side, 12" Ø concrete pipe	x	
WD-122	east side, 8" Ø CMP	x	
WD-123	west side, 6" Ø CMP	x	
WD-124	east side, 6" Ø CMP	x	
WD-125	west side, 24" Ø CMP		x
WD-126	east side, 36" Ø CMP	x	
WD-127	west side, 15" Ø CMP	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-128	west side, small watercourse	x	
WD-129	west side, small watercourse	x	
WD-130	west side, watercourse		x
WD-131	east side, 15" Ø CMP	x	
WD-132	east side, 6" Ø pipe	x	
WD-133	east side, 6" Ø pipe	x	
WD-134	east side, 6" Ø pipe	x	
WD-135	west side, 66" Ø concrete pipe		x
WD-136	east side, 6" Ø pipe	x	
WD-137	east side, 6" Ø pipe	x	
WD-138	west side, 30" Ø concrete pipe		x
WD-139	west side, 15" Ø CMP	x	
WD-140	east side, 15" Ø CMP		x
WD-141	west side, 24" Ø concrete pipe	x	
WD-142	east side, watercourse		x
WD-143	west side, 24" Ø concrete pipe	x	
WD-144	east side, 24" Ø concrete pipe		x
WD-145	east side, 12" Ø CMP	x	
WD-146	east side, watercourse	x	
WD-147	west side, 18" Ø CMP		x
WD-148	west side, 8" Ø CMP	x	
WD-149	east side, 24" Ø concrete pipe	x	
WD-150	west side, 24" Ø CMP	x	
WD-151	west side, watercourse		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
WD-152	west side, watercourse		x
WD-153	west side, watercourse		x
WD-154	west side, watercourse	x	
WD-155	east side, 10" Ø CMP (plugged)	x	
WD-156	east side, watercourse		x
WD-157	east side, 10" Ø clay pipe		x
WD-158	east side, 8" Ø clay pipe	x	
WD-159	east side, 8" Ø clay pipe		x
WD-160	east side, 8" Ø clay pipe		x
WD-161	west side, drainage ditch		x
WD-162	east side, 6" Ø concrete pipe	x	
WD-163	west side, 12" Ø CMP discharging near top of bank		x
WD-164	east side, 30" Ø concrete pipe		x
WD-165	west side, 60" Ø concrete pipe		x
WD-166	east side, 60" Ø concrete pipe	x	

APPENDIX III

POINTS OF DISCHARGE TO EAST DON

<u>DESIGNATION</u>	<u>DESCRIPTION</u>	<u>SAMPLED</u>	
		<u>NO</u>	<u>YES</u>
ED-1	west side, 6" $\emptyset$ CMP	x	
ED-2	east side, 3 - 36" $\emptyset$ with flap valves	x	
ED-3	west side, 3' $\emptyset$ CMP		x
ED-4	west side, watercourse from 18" $\emptyset$ CMP	x	
ED-5	west side, drainage from swampy area	x	
ED-6	west side, 36" $\emptyset$ CMP	x	
ED-7	east side, watercourse		x
ED-8	east side, 5' $\emptyset$ concrete pipe		x
ED-9	east side, 4" $\emptyset$ clay pipe		x
ED-10	west side, 30" $\emptyset$ CMP	x	
ED-11	east side, watercourse		x
ED-11B	east side, 42" $\emptyset$ concrete pipe		x
ED-12	east side, watercourse		x
ED-13	west side, 36" $\emptyset$ CMP		x
ED-14	west side, 15" $\emptyset$ CMP	x	
ED-15	east side, watercourse		x
ED-16	west side, 48" $\emptyset$ CMP discharging to ditch		x
ED-17	east side, 15" $\emptyset$ concrete pipe		x
ED-18	east side, watercourse		x
ED-19	east side, watercourse from 36" & 42" $\emptyset$ pipes		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
ED-20	east side, watercourse		x
ED-21	east side, watercourse		x
ED-22	east side, watercourse	x	
ED-23	west side, 36" Ø CMP		x
ED-24	east side, runoff from ski area		x
ED-25	west side, watercourse from culvert	x	
ED-26	east side, 12" Ø CMP		x
ED-27	east side, 24" Ø CMP	x	
ED-28	east side, 24" Ø CMP	x	
ED-29	east side, twin 60" Ø CMPs		x
ED-30	east side, 15" Ø CMP	x	
ED-31	east side, 15" Ø CMP	x	
ED-32	east side ? Ø concrete pipe	x	
ED-33	west side, 15" Ø CMP	x	
ED-34	west side, 15" Ø CMP	x	
ED-35	east side, 15" Ø CMP	x	
ED-36	east side, 15" Ø CMP	x	
ED-37	east side, 15" Ø CMP	x	
ED-38	west side, 15" Ø CMP	x	
ED-39	east side, watercourse		x
ED-40	west side, watercourse		x
ED-41	west side, 24" Ø concrete pipe	x	
ED-42	east side, 15" Ø CMP		x
ED-43	east side, watercourse		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
ED-44	east side, 36" Ø CMP		x
ED-45	east side, 36" Ø CMP		x
ED-46	west side, 60" Ø concrete pipe		x
ED-47	west side, 8' x 6' concrete culvert	x	
ED-48	east side, watercourse		x
ED-49	west side, three 30" Ø CMP		x
ED-50	east side, 60" Ø concrete pipe		x
ED-51	east side, 15" Ø CMP		x
ED-52	east side, 36" Ø concrete pipe		x
ED-53	west side, 15" Ø CMP		x
ED-54	east side, 15" Ø CMP	x	
ED-55	east side, 36" Ø CMP		x
ED-56	east side, 24" Ø concrete pipe	x	
ED-57	east side, 15" Ø CMP		x
ED-58	west side, 60" Ø concrete pipe		x
ED-59	east side, 15" Ø CMP	x	
ED-60	east side, 15" Ø CMP	x	
ED-61	east side, watercourse discharging via 18" Ø pipe		x
ED-62	east side, 9' Ø concrete pipe	x	
ED-63	east side, watercourse		x
ED-64	east side, 24" Ø cast iron pipe	x	
ED-65	east side, watercourse		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
ED-66	east side, watercourse		x
ED-67	west side, watercourse		x
ED-68	west side, 18" Ø CMP	x	
ED-69	west side, 15" Ø CMP	x	
ED-70	west side, 60" Ø concrete pipe		x
ED-71	east side, watercourse		x
ED-72	west side, 24" Ø pipe		x
ED-73	east side, watercourse		x
ED-74	west side, 21" Ø pipe		x
ED-75	west side, 36" Ø concrete pipe	x	
ED-76	east side, 30" Ø concrete pipe	x	
ED-77	east side, 36" Ø pipe		x
ED-78	east side, 48" Ø CMP		x
ED-79	east side, 24" Ø concrete pipe	x	
ED-80	west side, watercourse		x
ED-81	west side, 21" Ø outfall to wooden spillway to watercourse ED-80		x
ED-82	west side, watercourse		x
ED-83	west side, 15" Ø pipe		x
ED-84	east side, watercourse		x
ED-85	west side, ditch		x
ED-86	east side, 24" Ø concrete pipe		x
ED-87	east side, 24" Ø CMP		x
ED-88	west side, watercourse	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
ED-89	east side, watercourse		x
ED-90	west side, ditch		x
ED-91	east side, watercourse		x
ED-92	east side, 42" Ø pipe		x
ED-93	west side, 15" Ø pipe		x
ED-94	east side, 12" Ø CMP	x	
ED-95	east side, 15" Ø pipe		x
ED-96	west side, watercourse	x	
ED-97	east side, watercourse		x
ED-98	east side, 18" Ø concrete pipe	x	
ED-99	west side, 36" Ø CMP	x	
ED-100	east side, watercourse	x	
ED-101	east side, 36" Ø CMP		x
ED-102	west side, watercourse	x	
ED-103	west side, 24" Ø concrete pipe	x	
ED-104	east side, 18" Ø CMP	x	
ED-105	west side, watercourse	x	
ED-106	west side, watercourse	x	
ED-107	west side, watercourse	x	
ED-108	west side, 42" Ø concrete pipe	x	
ED-109	east side, 15" Ø CMP	x	
ED-110	east side, 12" Ø CMP	x	
ED-111	west side, 36" Ø CMP	x	
ED-112	east side, 18" Ø pipe	x	
ED-113	west side, 18" Ø pipe	x	
ED-114	German Mills Creek at Leslie St.		x

APPENDIX IV

POINTS OF DISCHARGE TO TAYLOR CREEK

<u>DESIGNATION</u>	<u>DESCRIPTION</u>	<u>SAMPLED</u>	
		<u>NO</u>	<u>YES</u>
T-1	north side, 24" $\emptyset$ concrete pipe		x
T-2	south side, 6' x 8' rectangular concrete culvert	x	
T-3	south side, 12" $\emptyset$ CMP	x	
T-4	south side, 30" $\emptyset$ CMP		x
T-5	south side, 24" $\emptyset$ CMP	x	
T-6	north side, 10" $\emptyset$ CMP	x	
T-7	south side, 4" $\emptyset$ CMP	x	
T-8	south side, 36" $\emptyset$ cast iron pipe	x	
T-9	south side, watercourse	x	
T-10	north side, watercourse	x	
T-11	north side, watercourse		x
T-12	south side, watercourse discharging via 12" $\emptyset$ pipe	x	
T-13	south side, 36" $\emptyset$ CMP	x	
T-14	south side, 24" $\emptyset$ CMP	x	
T-15	south side, 24" $\emptyset$ CMP	x	
T-16	south side, 5' x 5' rectangular concrete culvert	x	
T-17	north side, 4" $\emptyset$ CMP	x	
T-18	north side, 30" $\emptyset$ CMP		x
T-19	north side, watercourse		x
T-20	south side, 12" $\emptyset$ CMP		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
T-21	south side, 12" Ø concrete pipe		x
T-22	south side, 12" Ø CMP		x
T-23	south side, 4" Ø CMP	x	
T-24	south side, 12" Ø CMP	x	
T-25	north side, 24" Ø CMP		x
T-26	south side, 12" Ø CMP	x	
T-27	south side, 12" Ø CMP	x	
T-28	south side, 12" Ø CMP	x	
T-29	north side, 6" Ø CMP	x	
T-30	north side, 12" Ø CMP	x	
T-31	north side, 15" Ø CMP		x
T-32	south side, 15" Ø CMP	x	
T-33	south side, 10" Ø CMP		x
T-34	north side, 6" Ø CMP	x	
T-35	south side, 12" Ø CMP	x	
T-36	south side, 6' x 10' rectangular concrete culvert	x	
T-37	south side, 18" Ø CMP		x
T-38	north side, 30" Ø CMP		x
T-39	south side, 12" Ø CMP		x
T-40	north side, 12" Ø concrete pipe	x	
T-41	north side, 18" Ø concrete pipe	x	
T-42	south side, 18" Ø CMP		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
T-43	south side, 48" Ø concrete pipe	x	
T-44	north side, 20" Ø CMP		x
T-45	north side, 12" Ø ACCMP	x	
T-46	south side, 18" Ø CMP		x
T-47	south side, leachate		x
T-48	south side, 14" Ø concrete pipe	x	
T-49	north side, 18" Ø CMP		x
T-50	south side, drainage		x
T-51	south side, 60" Ø concrete pipe		x
T-52	north side, 42" Ø CMP	x	
T-53	north side, 30" Ø CMP		x
T-54	north side, 24" Ø concrete pipe	x	
T-55	south side, 24" Ø CMP	x	
T-56	north side, 20" Ø CMP	x	
T-57	south side, 15" Ø CMP	x	
T-58	south side, 96" Ø concrete pipe		x
T-59	south side, 8" Ø CMP	x	
T-60	south side, 15" Ø concrete pipe		x
T-61	south side, 36" Ø concrete pipe		x
T-62	north side, 48" Ø concrete pipe	x	
T-63	south side, 48" Ø concrete pipe		x
T-64	north side, watercourse		x
T-65	north side, 36" Ø CMP		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
T-66	north side, ditch		x
T-67	north side, 36" Ø CMP (under bridge)		x
T-68	south side, 18" Ø concrete pipe		x
T-69	north side, 15" x 24" concrete pipe		x
T-70	south side, 20" Ø CMP		x
T-71	north side, 30" Ø concrete pipe		x
T-72	north side, 24" Ø concrete pipe		x
T-73	south side, 27" Ø CMP	x	
T-74	south side, 10" Ø CMP	x	
T-75	north side, outfall under bridge	x	
T-76	south side, outfall under bridge	x	
T-77	north side, 15" Ø CMP		x
T-78	north side, 15" Ø CMP	x	
T-79	south side, 18" Ø concrete pipe		x
T-80	south side, 24" x 36" oval pipe		x
T-81	south side, 24" x 36" oval pipe		x
T-82	north side, 12" Ø clay pipe		x
T-83	east side, 30" Ø pipe	x	
T-84	west side, ditch		x
T-85	east side, 12" Ø CMP	x	
T-86	east side, 48" Ø CMP		x
T-87	east side, 12" Ø CMP	x	
T-88	east side, 15" Ø pipe		x
T-89	west side, 36" Ø pipe		x

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
T-90	east side, ditch		x
T-91	east side, 36" Ø pipe		x
T-92	east side, 48" Ø pipe		x
T-93	west side, 48" Ø pipe		x
T-94	west side, 36" Ø concrete pipe		x
T-95	east side, 15" Ø concrete pipe		x
T-96	east side, 36" Ø pipe		x
T-97	east side, 36" Ø pipe		x
T-98	east side, 20" Ø pipe	x	
T-99	west side, 15" Ø pipe	x	
T-100	east side, 15" Ø pipe	x	
T-101	west side, 36" Ø pipe	x	
T-102	east side, 15" Ø pipe		x
T-103	east side, 18" Ø concrete pipe		x
T-104	west side, ditch from 6" Ø pipe		x
T-105	east side, 24" Ø concrete pipe	x	
T-106	east side, 20" Ø concrete pipe		x
T-107	east side, 48" Ø pipe		x
T-108	west side, 36" Ø pipe	x	
T-109	east side, 42" Ø concrete pipe		x
T-110	east side, 36" Ø concrete pipe	x	
T-111	west side, 18" Ø concrete pipe		x
T-112	east side, 36" Ø concrete pipe	x	

DESIGNATION	DESCRIPTION	SAMPLED	
		NO	YES
T-113	east side, 10" Ø concrete pipe	x	
T-114	west side, 36" Ø pipe	x	
T-115	east side, 15" Ø pipe	x	
T-116	west side, 10" Ø concrete pipe	x	
T-117	west side, 18" Ø pipe		x
T-118	east side, 18" Ø concrete pipe opposite Willowfield Gardens Public School	x	
T-119	west side, 15" Ø concrete pipe at Penworth and Cavehill	x	

APPENDIX V

METEOROLOGICAL DATA

<u>DATE</u> <u>(1970)</u>	<u>TEMPERATURE (°F)</u>		<u>PRECIPITATION (inches)</u>		
	<u>High</u>	<u>Low</u>	<u>Rain</u>	<u>Snow</u>	<u>Total*</u>
March 22	41	33	.02	2.6	.28
March 23	40	33	.03	0	.03
March 24	45	33	0	0	0
March 25	47	31	0	1.2	.14
March 26	42	32	.10	trace	.13
March 27	43	28	0	0	0
March 28	36	28	.05	0.5	.10
March 29	29	20	0	0	0
March 30	32	20	0	0	0
March 31	40	23	0	0	0
April 1	41	30	.45	.8	.60
April 2	38	32	.63	.3	.67
April 3	43	30	0	0	0
April 4	44	31	0	trace	trace
April 5	41	28	0	0	0

<u>DATE</u> <u>(1970)</u>	<u>TEMPERATURE (°F)</u>		<u>PRECIPITATION (inches)</u>		
	<u>High</u>	<u>Low</u>	<u>Rain</u>	<u>Snow</u>	<u>Total</u> *
April 6	49	33	trace	0	trace
April 7	51	34	0	0	0
April 8	63	37	0	0	0
April 9	56	40	0	0	0
April 10	37	30	0	trace	trace

* total equals rainfall in inches plus water equivalent of snowfall
in inches

Data from Monthly Meteorological Summary for Toronto City -
Meteorological Branch - Department of Transport - Canada

GLOSSARY

BIOCHEMICAL OXYGEN DEMAND (BOD₅) - The quantity of oxygen required during the stabilization of decomposable organic matter and oxidizable inorganic matter by aerobic biological action, measured over a five day period at 20°C in the absence of light. BOD₅ is employed to indicate relative organic content of raw and treated sewage, surface waters, etc.

CMP - Corrugated metal pipe

COMBINED SEWER - A sewer that was intended to carry both sanitary and storm flows. A combined sewer system, therefore, has only one local collector sewer on each street, and this collector receives both storm and sanitary wastes.

CONTAMINATE - Introduce or release into a receiving water potentially pathogenic organisms or toxic substances that render the water hazardous for human consumption or domestic use.

COLIFORM BACTERIA - Coliform bacteria are inhabitants of the intestines of man and animals and are present in human sewage in extremely high numbers. In addition, some species of coliform bacteria can be found in soil and decaying vegetation.

Faecal coliforms are, as implied, of faecal origin and their presence in significant quantity denotes recent contact with human or animal waste.

FAECAL COLIFORMS - see above

OUTFALL - The outlet or mouth of a river, dam, sewer, etc., where it discharges to a lake, river, stream, etc.

PHENOLIC COMPOUNDS - Phenols are hydroxy derivatives of benzene and its condensed nuclei. They are usually present in surface water as a result of contact with petroleum products.

POLLUTE - Introduce or release into a receiving water substances of such volume and character that the natural quality of the water is altered so as to reduce its usefulness or render it offensive to sight, taste or smell.

SANITARY SEWER - A sewer intended to carry domestic and industrial wastes only.

SEPARATE SEWER SYSTEM - A sewer system comprising two non-interconnected sets of sewers, one to carry domestic and industrial wastes (sanitary sewer), and one to carry storm water (storm sewer).

STORM SEWER - A sewer intended to carry storm water and relatively unpolluted discharges only, (i.e. cooling waters).

SOLIDS - Suspended solids concentration is the concentration of suspended material in the water, dissolved solids that of the dissolved material, and total solids the sum of the two.

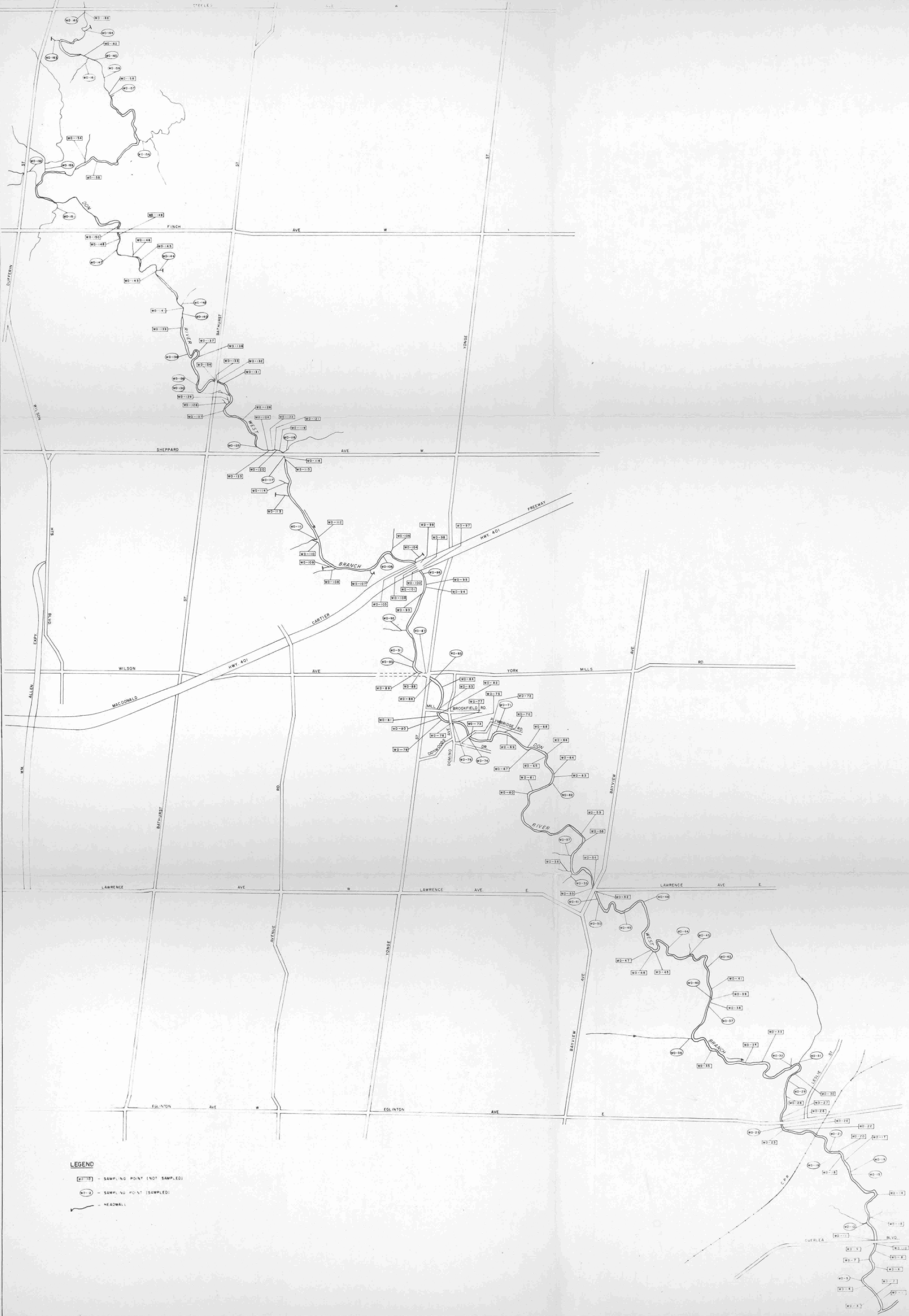
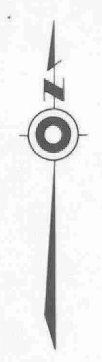


 - SAMPLING POINT (NOT SAMPLED)
 - SAMPLING POINT (SAMPLED)
 - HEADWALL



Water pollution survey
Metro Toronto

ONTARIO WATER RESOURCES COMMISSION	
DON RIVER (MAIN)	
FIGURE : 1	
DRAWN BY: L.L. BROOME	DATE: JULY, 1970
CHECKED BY: N.E.	DRAWING NO: 70-108-DE



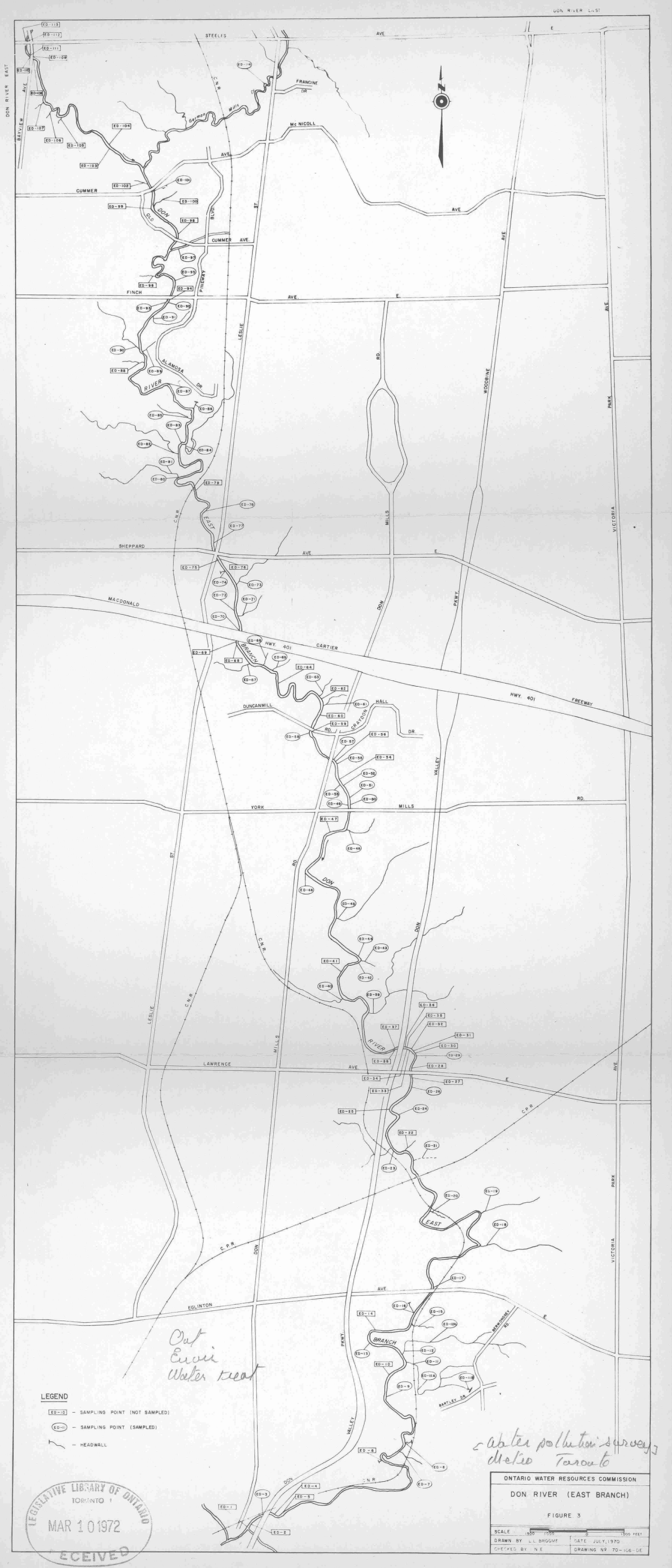
LEGEND
WD-1 - SAMPLING POINT (NOT SAMPLED)
WD-2 - SAMPLING POINT (SAMPLED)
— HEADWALL

*Out-
Envir
Water Treat*



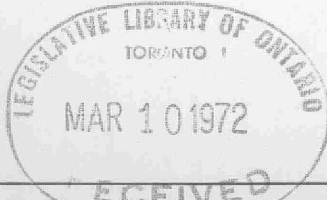
*Water pollution survey,
Metro Toronto*

ONTARIO WATER RESOURCES COMMISSION			
DON RIVER (WEST BRANCH)			
FIGURE 2			
SCALE	1500	1000	0 1000 2000 FEET
DRAWN BY	L. L. BROOME	DATE	JULY, 1970
CHECKED BY	N. E.	DRAWING NO.	70-107-DE



LEGEND

- ED-10 - SAMPLING POINT (NOT SAMPLED)
- ED-11 - SAMPLING POINT (SAMPLED)
- HEADWALL



ONTARIO WATER RESOURCES COMMISSION
DON RIVER (EAST BRANCH)

FIGURE 3

SCALE 1:500 1:1000 1:2000 1:5000 FEET
DRAWN BY L.L. BROOME DATE JULY, 1970
CHECKED BY N.E. DRAWING NO. 70-106-DE

Water pollution survey
Metro Toronto





96936000009195